

## Department of Energy

## § 440.21

cost weatherization activities provided:

(1) Inexpensive weatherization materials are used, such as water flow controllers, furnace or cooling filters, or items which are primarily directed toward reducing infiltration, including weatherstripping, caulking, glass patching, and insulation for plugging and

(2) No labor paid with funds provided under this part is used to install weatherization materials referred to in paragraph (a)(1) of this section.

(b) A maximum of 10 percent of the amount allocated to a subgrantee, not to exceed \$50 in materials costs per dwelling unit, may be expended to carry out low-cost/no-cost weatherization activities, unless the Support Office Director approves a higher expenditure per dwelling unit.

[49 FR 3629, Jan. 27, 1984, as amended at 50 FR 713, Jan. 4, 1985; 58 FR 12529, Mar. 4, 1993]

### **§ 440.21 Standards and techniques for weatherization.**

(a) Paragraphs (b) through (g) of this section set forth the energy audit procedures which apply to the grantees and subgrantees who are subject to the 40 percent material cost requirement in § 440.18(a) of this part. Paragraphs (b), (d), (e), and (h) through (k) of this section set forth the requirements for the energy audit procedures which, if satisfied in the State plan, warrant approval of a State's application to waive the 40 percent material cost requirement in § 440.18(a) of this part.

(b) Only weatherization materials which are listed in appendix A and which meet or exceed standards prescribed in appendix A to this part shall be purchased with funds provided under this part, except that DOE may approve an unlisted material upon application from any State.

(c) The most cost-effective weatherization materials for each dwelling unit shall be determined by audit procedures using the following formula:

(1) The cost of fuel saved per year by installing a weatherization material in a dwelling unit;

(2) Multiplied by the appropriate lifetime of the weatherization material; and

(3) Divided by the cost of the weatherization material and the cost of the installation of the weatherization material.

(d) The computation of the cost of fuel saved per year must take into account the number of heating or cooling degree days in the area of which the computation is being made and must otherwise use reasonable methods and assumptions.

(e) The figures used for the lifetime of the materials and for the costs of materials and cost of the installation of the materials must be generally accepted in the relevant trade.

(f) The weatherization materials which shall be installed first are those which are determined to be the most cost effective using the formula in paragraph (c) of this section.

(g) The audit procedures used in Project Retro-Tech to determine the most cost-effective weatherization materials comply with this section. The grantee or subgrantee may use other audit procedures to determine the most cost-effective weatherization materials, provided that these procedures comply with this section and are approved by the Support Office Director prior to their use. A grantee or subgrantee may use results obtained from audits conducted under the Residential Conservation Service Program as part of the audit procedures which have been approved by the Support Office Director.

(h) The energy audit procedures must—

(1) Consider the rate of energy use;

(2) Address significant heating and cooling needs;

(3) Make provision for use of advanced diagnostic and assessment techniques which DOE has determined are consistent with sound engineering practices;

(4) Determine energy use from actual energy bills or by generally accepted engineering calculations;

(5) Consistent with paragraphs (d) and (e) of this section, determine that each weatherization material is cost effective by ensuring that the net fuel cost savings over the lifetime of such weatherization material, discounted to present value in accordance with paragraph (i) of this section, to the costs to

be claimed as allowable under § 440.18(c)(1), (2), and (7), and any other significant, related cost required to be included by a State, is greater than or equal to one;

(6) Assign priorities among weatherization materials in descending order of their cost effectiveness ratios calculated under paragraph (h)(5) of this section;

(i) After adjusting those ratios for interaction between architectural and mechanical weatherization materials by decreasing the estimated fuel cost savings for a lower priority weatherization material in light of fuel cost savings for a related higher priority weatherization material; and

(ii) Eliminating any weatherization material if its cost effectiveness ratio, as adjusted under paragraph (h)(6) of this section, is less than one;

(7) Determine that the total conservation investment has a positive rate of return by ensuring that the ratio of the cumulative net fuel cost savings of all weatherization materials, adjusted for interaction between architectural and mechanical weatherization materials if any, to the cumulative costs included under paragraph (h)(5) of this section and the costs to be claimed as allowable under § 440.18(c)(9), is greater than or equal to one;

(8) Identify health and safety hazards to be abated with DOE funds in compliance with the State's DOE-approved health and safety procedures under § 440.16(h); and

(9) Treat the dwelling unit as a whole system by examining its heating and cooling system, its air exchange system and its occupants' living habits and needs, and making necessary adjustments to the priority of weatherization materials with adequate documentation of the reasons for such an adjustment.

(i) The energy audit must provide for use of the annually adjusted discount rate provided by DOE except that a State may keep that rate constant up to 5 years or may use a reasonable higher real discount rate. Subject to a ceiling of 10 percent and floor of 3 percent and subject to adjustment by DOE region for a rate of fuel cost escalation predicted by the DOE Energy Informa-

tion Administration, DOE shall calculate annually the adjusted discount rate, for use under paragraph (h) of this section as a 12-month average of the composite yields of all outstanding U.S. Treasury bonds neither due nor callable in less than 10 years, as most recently reported by the Federal Reserve, adjusted to exclude estimated increases in the general level of prices consistent with projections of inflation in the most recent Economic Report of the President's Council of Economic Advisers.

(j) For typical dwelling units without unusual energy consuming characteristics which significantly alter typical energy usage, energy audits may be accomplished by using a priority list developed by conducting, in compliance with paragraph (h) of this section, site-specific energy audits of a representative sample of typical dwelling units for each major dwelling type covered by the State's weatherization program. Priority lists developed in accordance with this paragraph must be revalidated by conducting a representative sample of site-specific energy audits every 5 years.

(k) Subject to DOE approval, a State may use as a part of an energy audit, a list of presumptively cost effective general heat waste reduction weatherization materials and the circumstance under which such materials may be presumed cost effective without need for further audit justification if those materials are shown to be cost effective in typical dwelling units for major dwelling unit types in the State based on documentation of a representative number of site-specific energy audits.

[58 FR 12527, Mar. 4, 1993]

#### **§ 440.22 Eligible dwelling units.**

(a) A dwelling unit shall be eligible for weatherization assistance under this part if it is occupied by a family unit:

(1) Whose income is at or below 125 percent of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget;

(2) Which contains a member who has received cash assistance payments under Title IV or XVI of the Social Security Act or applicable State or local